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ABSTRACT

This report focuses on the development and implementation of a 1-day classroom observation schedule designed to evaluate the Responsive Education Program, a compensatory program of formal education for children, ages 3-9, and their families. The program is an effort to create Head Start and Follow Through programs for children who are ethnically and culturally different from white middle-class children. A complete description of the program, including its assumptions and applications in the classroom, forms the introduction to the report. A discussion of the observation schedule that has been developed follows. The instrument is based on five indepth instruments (physical arrangement of the classroom, cultural relevance, language development, development of self-concept, and problem solving) which were reduced to 70 items in question form, divided into nine sections. A 2-day workshop designed to train participants on use of the instrument is described. As a result of the workshop, some of the participants were chosen to field test the instrument; the results of this field testing form the conclusion of the report. (ED)

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THE RESPONSIVE CLASSROOM OBSERVATION SCHEDULE --

BACKGROUND AND DEVELOPMENT

by

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The Responsive Classroom Observation Schedule -- Background and Development

I. Overview of the Responsive Education Program for Early Childhood Education

Formal education can and should start before a child is five or six. It does not, however, need to take place within a classroom. Formal education can happen in the home with one child or a small group of two to five children, in a day-care home with groups of fifteen or more children, in a Head Start or day-care classroom, or in a public school. In contrast to informal education, formal education is a well-planned, structured program of educational experiences that aid in the systematic development of a child's intellectual ability.

The Responsive Education Program is a program of formal education that attempts to take account of the varied educational needs of children between the ages of three and nine and their families: Underlying the program are several basic assumptions about the education of young children. The first is the notion that the family has the responsibility for the education of its children. The role of any educational institution is to aid the family in carrying out this responsibility.

A second assumption is that any formal educational program should provide a variety of alternatives to meet the needs of the parents and their children. Some parents will want or need day-long, year-round day-care service for their children; others will need three to five hours in a classroom setting; still others will need assistance in working with their children at home.

A third assumption is that the educational program should be responsive to the learner's background, culture, and life-style. For example, if a child is Mexican-American and speaks Spanish, the educational program should respond by using materials that are relevant to his background and reflect his cultural heritage. The language of instruction should include Spanish, whether in a bilingual

program or in a program in which English is treated as a second language. The same emphasis is needed for Black children, Navajo children, and others. This notion implies a major change in the goals of the school as a social institution.

Instead of the traditional "melting pot" goal of blending divergent groups into a single homogeneous mass, the goal should be to develop a "tossed salad" of different cultures and life styles, enhancing the values and uniqueness of each culture, so that, taken together, they become complementary. In other words, the objective of the school institution should be to prepare people to live in a pluralistic society. The logic for recommending pluralism as an objective is:

1) Non-European minority groups have always resisted the efforts of the majority group to assimilate them. They have also resisted an educational system that tries to carry out the assimilation. This resistance, of course, limits the progress of minority children within the system and sets up conflicts for the child between the values of his family and the educational system.
2) In some respects a pluralistic society is probably less efficient than a more homogeneous society. However, because different points of view provide a wider variety of alternatives to choose from in the search for solutions to problems, it is probably much richer and more productive in the long run. The logic is the same as that applied to interdisciplinary studies. Diversity can enrich rather than impoverish.

The goal of a pluralistic society has two implications:

1) The public schools will have to take into account what the children learn before they start school; and
2) They will have to be more responsive to individual children and their parents.

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The basic problem with the present system is that the schools are designed to serve white middle-class students who hold the same values as the teachers, or other children who want to emulate white middle-class children. The schools respond to these children and nuture their development. This attitude is evident in both procedures and content.

The procedures are built around the concept that all children at a given age are ready to learn the same thing (with some consideration given to inherited differences in ability) and are motivated by the same factors. That is, children will avoid failure, low marks, or retention in grade, and will work for success, high marks, and praise from the teacher. Following this concept, most instruction takes place in front of groups of twenty-five or more students. The content is designed to be generally interesting to the average student; the major motivation is threat of failure or promise of success.

The curriculum is essentially designed to produce educated white citizens who hold the same values. The curriculum materials, which reflect Anglo-European history, are chosen to motivate and assist white children. The bias in the choice of curriculum materials is obvious when they are viewed from the perspective of minority groups. For example, most history books devote more pages to the exploration of the coast of America by the Europeans than they do the entire history of Native Americans before Columbus landed. Columbus "discovered" America only if one accepts the point of view of certain Europeans; the Native Americans were already here. In beginning readers, the pictures provided to cue children to word meaning seem usually to show a white suburban setting in the Middle Atlantic states or New England.

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Some federally supported programs, including the Head Start and Follow Through programs, have recognized that the current school system fails to meet the needs of culturally and ethnically different children. Within these national programs, efforts have been encouraged that either help a child to respond to the existing system or change the system to respond to the existing child. Nevertheless, there are too few examples of schools providing for children who are culturally different or who have different life styles. For instance, some programs recognize that, since English is a second language for Spanish speaking children, it should be taught from that point of view. But relatively few experimental programs are concerned with developing bilingualism, and fewer still have any content that is relevant to the child's background. Perhaps the prime reason for this is that neither the parents nor the children themselves have had an effective voice in shaping their education.

Our goal in developing the Responsive Education Program is to provide a program that will meet the needs of at least 90% of the children between the ages of three and nine and their parents. The program originated as an effort to create Head Start and Follow Through programs that responded to children who are ethnically and culturally different from white middle-class children. To some extent, it still focuses on these programs. We concentrated on these programs at the beginning of development for two reasons. First, the needs of these children are the greatest, because the present system is least responsive to them. Second, we believe that if we can design a program that responds to these children, we will be able to respond to the needs of the children for whom the schools are designed and of the children in the intermediate categories.

Currently the Responsive Education Program has three parts: a preschool program for three- to five-year old children in Head Start, day care or preschool

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classrooms; a primary school (including Follow Through) program for children in kindergarten through third grade; and a Parent/Child Toy-Lending Library program designed for parents who wish to work at home with their children.

II. Objectives of the Program

The major objectives for the learner in the program are to help the learner to develop or maintain a healthy self-concept in relation to learning in the school and the home, and to develop his intellectual ability. These two objectives are inter-related and cannot be treated as though they were independent of each other.

We define a healthy self-concept as a realistic but basically positive view of oneself. A child has a healthy self-concept in relation to learning and school if:

1) he likes himself and his people;
2) he believes that what he thinks, says, and does makes a difference;
3) he believes that he can be successful in school;
4) he believes that he can solve a variety of problems;
5) he has a realistic estimate of his own abilities and limitations;
6) he expresses feelings of pleasure and enjoyment.

In long-range terms, a healthy self-concept is probably the most important single objective in the development of an individual. We recognize, however, that many of the factors that affect a child's self-concept, such as the family, peer group, and general community, are outside of the influence of the school. In our program, therefore, we concentrate on the development of self-concept in relation to the school and the learning environment.

The second major objective of the program is to help the learner develop his basic intellectual abilities. In order to learn, an individual needs to develop:

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1) his senses and perceptions because the senses are the source of data for the thought process;

2) his language ability because language is a tool of the thought process;

3) his concept-formation ability because he needs to be able to deal with abstractions and to classify information to organize thought.

These two objectives, self-concept and cognitive development, overlap and interact in the realm of problem-solving. Problem-solving is the process of arriving at answers to questions or unresolved situations. In order to solve problems, an individual needs not only intellectual abilities but also the self-confidence that comes from having a healthy self-concept.

Every challenge a person meets, whether in school or outside of it, can be defined as some kind of problem. Three general classifications for problems are non-interactional, interactional, and affective. A non-interactional or physical problem involves only one person; an arithmetic problem and a puzzle are examples. To solve this kind of problem, a person manipulates his physical environment but he is not acted upon in the same way. Usually, the answer to a non-interactional problem can be predicted and people agree on the appropriateness of the solution. The conventional school curriculum deals mainly with this type of problem-solving and intelligence tests are primarily tests of an individual's ability to solve puzzles.

An interactional problem involves two or more persons (or machines) and requires a person to think, "If I do this, what is he likely to do?" The individual is being manipulated at the same time he is manipulating. Games like poker, chess, and hide-and-seek are good examples of interactional problems. Obviously, solutions to interactional problems are not as easily agreed on or verified as solutions to non-interactional problems.

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It is possible to consider the first two kinds of problems without considering the emotional overtones, but emotion is usually involved to some degree. When the emotional aspects of a problem become the dominant consideration, the problem becomes affective. For example, if a child has difficulty reading because he lacks self-confidence, the teacher would have to start by dealing with an affective problem.

Although the conventional school system focuses only on the first kind of problem, we believe that an educational program should help the child learn to solve all three kinds of problems. In many instances, a learner cannot solve a non-interactional or interactional problem until he has overcome some affective problem related to self-concept.

We believe that a person who is developing the ability to solve problems is learning how to learn. To help children develop problem-solving ability, we emphasize the learning of problem-solving skills and strategies[1] rather than correct answers. We encourage discovery learning in which the child discovers answers for himself instead of being told the answer by the teacher or parent. As the child goes through the process of discovering answers, he learns problem-solving skills. The role of the parent or teacher in discovery learning is to respond to the child and to structure the learning environment in a way that poses problems he wants to solve and guides him to discovering his own answers.

Obviously, both cognitive skills and self-concept have a strong interaction with problem-solving. For instance, language skills and the ability to classify

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[1] For a further discussion of problem-solving skills and strategies, see Glen Nimnicht and Barry Barnes, Objectives of the Responsive Head Start and Follow Through Program, Far West Laboratory for Educational Research and Development, Berkeley, 1971. We have identified a number of problem-solving skills and strategies and we assume there are others. Two examples of problem-solving strategies are inductive reasoning, or generalizing rules from examples, which is useful in both non-interactional and interactional problems; and hypothesizing, or conceptualizing responses to alternative actions, which is useful in solving interactional problems.

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information, which are part of cognitive development, are essential to most problem-solving. In addition, certain characteristics related to a healthy self-concept are important to the affective aspects of problem-solving.

Examples of these characteristics include willingness to risk failure in solving a problem, confidence in one's solution, and the ability to adjust expectations for the future on the basis of previous experience.

Since healthy self-concept and cognitive development overlap in the realm of problem-solving, we consider problem-solving the central educational objective of the program. However, problem-solving does not encompass all of the objectives of the program. Some important aspects of self-concept and cognitive development, which we value, lie outside the realm of problem-solving. For example, the development of a child's understanding of and positive feeling for his background, which are part of a healthy self-concept, may have relatively little bearing on his ability to solve problems, but we include these in our objectives. Likewise, the development of artistic abilities and poetic expression, which are part of cognitive development, may have little or no relationship to a person's ability to solve problems, but we value these abilities as well.

How Learning Takes Place. To achieve the above objectives, the program is based upon the idea of an environment that is designed to respond to the learner and in which all learning activities are "autotelic" of self-rewarding.

A learning environment that responds to the student fulfuills the following conditions:

a) it permits the learner to explore freely, within the structure provided by the teacher;

b) it informs the learner immediately about the consequences of his actions (gives him "feedback");

c) it is self-pacing, allowing the learner to choose activities at his own rate;

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d) it permits the learner to make full use of his capacity for discovering relationships of various kinds;

e) it is structured in such a way that the learner is likely to make a series of interconnected discoveries about the physical, cultural, or social world.

The activities within the environment are autotelic. An autotelic activity is self-rewarding; the learner is motivated by the satisfaction of participating in the activity rather than by rewards unrelated to the activity or threats of punishments such as bad grades.

Not all self-rewarding activities are autotelic, however. To be autotelic, an activity must also help the learner develop a skill or learn a concept or develop an attitude that is useful in some other activity. Autotelic activities are intentionally designed to reduce the rewards for success or the punishment for failure to limits that the learner and society can tolerate, so that the learner can master some skill that is useful in life, but one which he may not be able to learn through direct experience since the cost of failure is too great to tolerate.

For example, in many of our autotelic activities, the only reward is the successful completion of the task. If a child is not successful, he knows he did not complete the task, but he is not punished with a bad grade. Furthermore, he may leave the task if he wishes. Other autotelic activities are games in which the reward is winning. The child knows if he does not win he does not forfeit a prize and he may stop playing the game or play with someone else. We believe that any educational program for young children must enable them to avoid painful experiences that can affect future learning. The use of autotelic activities provides this protection.

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III. Application of the Procedures to the Classroom

Throughout the day, the children are free to choose from a variety of activities, such as artwork, working with puzzles, looking at books, listening to records, playing with manipulative toys, and activities related to reading, science, and mathematics. They may stay with an activity as long as they like and move on to a new activity whenever they wish to do so. As the day progresses, small groups of children choose to play games with specific learning objectives (called "learning episodes") with the teacher or assistant and others ask to be read to.

During the day, the teacher and assistant read to the children, play games with them and respond to the children's spontaneous activities that build the experience that precedes instruction in some skill or concept. Adult-initiated conversation is limited, but child-initiated conversation is encouraged; the teacher and assistant respond to the children rather than having the children respond to them.

Once or twice a day, there are large group activities, such as singing, listening to a story, or participating in a planned lesson. A child does not have to take part in a large group activity if he does not want to, but he may not continue in any activity that disturbs the group.

Although the children have free choice of activities within the classroom environment, the teacher and assistant structure the environment by deciding, on the basis of their planning for specific learning objectives, which activities and materials shall be available each day. The adults attempt to arrange the materials and respond to the children in a way that will pose problems the children want to solve and that will guide them to learning specific skills or concepts.

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In planning the activities and materials to be made available, the teacher and assistant consider not only specific learning objectives, but also the background, interests, level of development, and individual characteristics of the children in order to provide choices that are appropriate and responsive to each child. To facilitate their planning, the teacher and assistant make systematic observations of each child.

Because the children have free choice, responsive classrooms tend to be noisier than conventional classrooms. However, certain definite limits on behavior, based on considerations of health, safety, and respect for others' rights, are established. The adults attempt to prevent conflicts by planning responsive activities and by anticipating problems. If discipline problems arise, an adult attempts to guide the child to self-control, first by giving him a chance to control himself, and then, if necessary, by using techniques such as redirection to another activity.

A typical preschool classroom in the Responsive Program might appear as follows:

The classroom contains 15-20 children, a teacher, a teacher assistant, and a parent volunteer. In the manipulative toy area, the teacher assistant is using the flannel board to conduct a learning episode with two children, while a third child plays by herself with a different manipulative toy.

The learning episode is "What shape doesn't belong?" The objective of the episode is to help children learn various shape concepts by using the problem-solving process of discriminating between matching and non-matching shapes. The assistant is arranging small yellow triangles, circles, and squares on the flannel board into groups of three or four. In each group, one shape is different from the others. She asks the children to find which shape doesn't belong, and reinforces their

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identification with comments such as "That's right, the circle is not the same shape as the triangles." If the children wish to change the rules of the games or stop playing, they are free to do so.

The third child in the manipulative toy area has chosen to play with the stacking squares toy. This toy has 16 colored wooden squares in four different sizes; they fit on a wooden post cut in such a way that the squares must be arranged by size. (Thus the toy is self-correcting.) As the child explores the toy, she discovers that the only way to fit all the squares on the post is to put the largest squares at the bottom and the smallest on the top.

In the dramatic play area, five children are using dress-up clothes and simple props made from familiar home materials to play going to the store. The parent volunteer is responding to their spontaneous play with the objective of extending their language. From their observation of children playing in this area, the adults have concluded that there is space for only five children, and they explained this rule to the children. When a sixth child comes over to play, the parent volunteer asks the children, "Six children want to play here. What is the rule?" After they answer, she poses a problem-solving question, "What can we do about this?" The children decide to construct with blocks a store outside of the play area, and the sixth child acts as the storekeeper.

Another child is looking at books in the reading area. Among the choices that the teachers have placed on the low shelves are books that reflect the different ethnic backgrounds of the children, and the story about sizes which a child asked the teacher assistant to read yesterday.

The teacher is working with children in the art area, which is equipped with two easels for painting and a table for other activities. Today she has provided two choices of art activities, easel painting and collage; four children want to

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paint, and two others are making collages from wallpaper, yarn, netting, and buttons. The teacher is introducing a new color, purple; consequently she has offered the children only red and blue paint, a more limited choice of colors than usual. As the children paint, some of them mix red and blue paint on their paper to produce purple. For the children making collages, the teacher has provided purple paper of various sizes and shapes to use for backgrounds, and many of the materials available for collage are purple.

The teacher, like the teacher assistant, is noting the children's activities on observation cards. At the end of the day, the teacher, assistant, and parent volunteer will discuss their observations in order to plan for the following week.

In the snack area, two children have poured their own juice. When they feel they are ready, the other children will come to this area for their snacks. To reinforce the concept of purple, the adults provided purple grape juice today and tomorrow the snack will be purple grapes. The concept of purple is also reinforced in the concept-formation area, where many of the magazine pictures on the bulletin board and objects on the table are purple.

Later, the teacher will begin a large-group activity. To attract the attention of children who may wish to participate, she starts with a clapping game. During this ten- to twenty-minute period, she also sings a folk song with children and reads from the book about shapes. The parent volunteer joins the activity, and at the end of large-group time she sings a song in which she dismisses the children individually by name so that they go outside in an orderly way. The teacher waits by the door to the playground and when the first five children have put on their coats, she leads them outside. The parent volunteer and the teacher assistant follow with the other children when they are ready.

For those who wish to join her in a game, the teacher assistant has brought

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ropes and chalk to the playground. She uses these to outline circles, sqaures, and triangles, and she plays a game by asking the children to stand or jump into the different shapes, e.g., "Johnny, you stand inside the circle."

This game requires a higher level of concept development than the learning episode she conducted earlier with the flannel board. In the earlier game, the children discriminated non-matching shapes; here, they are asked to demonstrate their visual recognition of a specific shape. The assistant has observed that two or three children are ready to produce shapes without visual clues, and she asks, "Becka, would you like to take the chalk and draw a circle?"

The activities in a typical kindergarten classroom are similar, but one important addition in kindergarten classrooms (or first grade classrooms in districts that have no kindergarten) is a Learning Booth. The Learning Booth is a typing booth equipped with a special electric typewriter and related materials for child-paced learning games; the booth is staffed by a trained booth attendant. The main objective of the games is to help children learn problem-solving skills. Since many of the problems presented in the games are related to reading, children are likely to learn some reading skills as well.

In classrooms that contain a Learning Booth, the booth attendant asks each child two or three times a week if he would like to play with the typewriter. If the child says "yes," the attendant takes him to the booth where the child may play with the typewriter for as long as ten minutes. In the first phase of Learning Booth games, the child simply explores the typewriter while the attendant responds to the child by naming the symbols he strikes, e.g., "X, comma, A, Y, return." The child will move from this first phase of free exploration to the phase of matching on the keyboard letters that are shown to him; discriminating among two or more letters shown to him; and producing his own words and stories on the typewriter. At

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each phase, the child's discovery of the rules of the new game is stressed.

In accordance with the principles of the responsive environment, the attendant attempts to respond to the child and let him set his own pace. If a child wishes to play in an earlier phase or leave the booth, he may do so.

In classrooms in the primary grades, (25-30 children) there is more emphasis on curriculum although the principle of free choice within a structured environment still applies. The classroom contains learning centers for reading, math, listening, science, and art; the teaching staff continues to work with children individually or in small groups most of the time.

The Laboratory does not provide a complete curriculum; we believe that each school or school district should determine its own curriculum on the basis of the needs of the children involved. The Laboratory does, however, suggest materials in mathematics and language skills which may be coordinated into a classroom's curriculum.

The suggested approach for mathematics centers around problem-solving skills. In the area of language, the suggested approach concentrates on written and oral language produced out of the child's own experience. Two methods used for encouraging children to produce language are the use of artwork, in which children describe the pictures they create, and dictation, in which the children dictate stories and the teacher writes down their words.

IV. Development of the One-Day Classroom Observation Schedule

Since its inception in 1968, the Responsive Education Program has been continually engaged in developing, field testing, and refining observation instruments that measure responsiveness. During the early years, an instrument that tallied specific behaviors was used and helped operationalize particular responsive

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concepts. This led to the identification and development of five in-depth instruments to reflect classroom variables in five areas of major concern:

- Physical Arrangement of the classroom
- Cultural Relevance
- Language Development
- Development of Healthy Self-Concept
- Problem Solving.

Some information is collected for these instruments by verbally questioning the teacher and the children. More emphasis is placed on observing interactions in the classroom. The observation instrument were developed by Laboratory staff otherwise responsible for producing teacher training materials in or related to the area covered by the instrument, and for supervising the training of teachers in the program. The actual training of teachers and teacher assistants was carried out within the districts by program advisors who were trained by the Laboratory. Program advisors used the instruments in their assessment and training.

These instruments were quite comprehensive. They could be used to good advantage as training aids by program advisors, and for self-assessment by teachers and teacher assistants with a working knowledge of Responsive principles and techniques. But the instruments were lengthy and not suitable for use by someone not versed in the Responsive Education Program.

The instrument was described in this paper for more general use. It is based on the five in-depth instruments and covers the essential elements of the Responsive Education Program, but is streamlined in several respects:

- It is easier and quicker to use than the set of five in-depth instruments.
- With training, it is suitable for use by school personnel not directly involved with the Responsive Education Program -- principals, parents, psychologists, etc.

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- It relies only on observation, making it more objective and reducing the need for removing class participants from their regular activities.

Description of the Instrument. The One-Day Classroom Observation Schedule has a manual with instructions for use, and a definition of each item. There are 70 items organized into nine sections:

1. Presence of Specific Areas in the Classroom (6 items): The observer determines if the classroom is arranged to include six different areas (private area; individual area; learning area with seating; learning area without seating; free work; large group area).

   Example of an item:

   1.1 PRIVATE AREA: a small private area with no specific functions and without working surfaces for sitting work. (At least one). Yes No

2. Focus on a Learning Center (7 items): The observer selects the most complete learning center in the classroom and decides if the center meets specific criteria, such as, being isolated from through traffic, etc.

   Example of an item:

   2.1 Is the center at least partially defined by physical boundaries such as room dividers, partitions, bookcases, etc? Yes No

3. Materials in the Classroom: Focus Language (8 items): The observer examines if classroom materials and displays include evidence of a Responsive Education Language Program (books made by children containing their own words and/or drawings, etc.).

   Example of an item:

   3.1 Are there sentences, or paragraphs, or stories written about or by the children in the class visible in the classroom? Yes No

4. Materials in the Classroom: Focus Children's Personal Representation (7 items): The observer determines if children's personal representation (such as, children's photographs) and child'made products are represented in the classroom.

   Example of an item:

   4.1 Are children's paintings/drawings displayed in the classroom? Yes No

5. Materials in the Classroom: Focus Family, Home, and Culture (5 items): The observer records if the classroom includes materials

or displays representing the children's families, life styles, or cultures; or families, life styles, or cultures of ethnic groups not represented by the children in the class.

Example of an item:

5.1 Are there classroom materials or displays arranged by the teacher that clearly represent the children's families, homes, or neighborhoods? Yes No

6. Learning Experience Observation: Focus Language/Pre-Reading (15 items): The observer witnesses a learning experience planned by the teacher that focuses on some aspect of language development from the beginning for fifteen minutes. The experience is to involve at least five children. The observer determines if the teacher uses certain processes of responsive teaching, such as, giving the children choices of tasks or choices of media to use in completing a task, etc.

   Example of an item:

   6.3 Were instructions given so that children could come up with a variety of responses reflecting their own feelings and ideas? Yes No

7. Learning Experience Observation: Focus Math/Pre-Math (15 items): This section includes the same items and procedures as in Section 6, except the observer records the behavior to a learning experience that focuses on some aspect of math/pre-math instead of language.

8. Classroom Management: During two separate five-minute time periods, the observer focuses on the teacher interacting with the children and tallies the incidences of three kinds of behavior that occur (demeaning behavior, teacher redirecting children, teacher ignoring children's behavior needing correction).

9. Overall Impressions: This is completed at the end of the observation. The observer rates the teacher's behavior on overall responsiveness to the needs and differences of children and three important clusters of teacher characteristics as suggested by Ryan (1960): "unplanned-disorganized-confused vs. planned-organized-clear"; "aloof-egocentric-restricted vs. friendly-warm-understanding"; "dull-unimaginative-routine vs. stimulating-imaginative-enthusiastic."

Items in the instrument (except for Sections 8 and 9) are in question form. The observer circles "Yes" or "No" to indicate the presence/absence of specified behaviors, materials, classroom areas, etc. For Section 8 the observer tallies occurrences of behaviors. Section 9 includes rating scales that range from 1 to

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5 with "5" being the most positive.

Each of these nine sections yields a score, and together these nine scores constitute a class profile in Responsive education -- from the teacher's point of view, a profile in Responsive teaching. For each section, reference points for adequacy of responsiveness have been derived from a content analysis of the instrument, as well as from empirical data that resulted from its use.

Training. To insure reliable data, a two-day training program has been developed to train observers to a predetermined criterion level. Criterion level performance from observers is a prerequisite for using the data.

The training strategy included the following steps: first the participants studied the definition for each of the 70 items in the training manual; next they experienced using the instrument in simulated situations; then they discussed their observations first with a partner, then with the total group. In the course of discussion, item meanings were further elaborated and/or clarified.

A variety of materials were used in the training: videotapes of learning episodes involving a teacher and a small group of children (for Section 6); slides of classrooms depicting different classroom arrangements (for Sections 1 and 2); written examples of teacher's classroom management behavior (for Section 8); and examples of classroom displayed materials, books, and children's products (for Sections 3, 4, and 5). A criterion test using videotapes of classroom process and classroom simulation experiences was also developed.

The schedule for the two-day training session was as follows:

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Day One

9:30	Introduction. (Discussion of different types of classroom observation instruments and the importance of reliability in conducting observation.)
	Overview of the tasks of the workshop.
10:00	Break.
10:15	Review training manual on Section 6, Learning Experience/ Language.
	View videotape which depicts a teacher working with a small group of children on a lesson about vegetables. Then trainees answer items on Sections 6 and 9 (Overall Impressions).
	Trainees record answers on master chart visible to all trainees.
	Trainees work in pairs to check their answers.
	Discuss in large groups for clarification and elaboration of the items about learning experience based on trainees' responses (answers). Items showing large variability of responses on master chart are clarified/discussed.
11:50	Review of training manual on Sections 3, 4, and 5 dealing with Classroom Materials.
12:00-1:30	Lunch.
1:30-2:00	Trainees observe classroom materials that are displayed in the training room and answer items that deal with classroom materials in the instrument.
3:00	Break.
3:15	View videotape which depicts a spelling lesson. Trainees then answer items in Section 6 (Learning Experience/Language) and Section 9 (Overall Impressions), and record answers on master chart.
	Trainees check their answers with a partner.
	Large group discussions to clarify and elaborate items dealing with learning experience based on trainees' responses. Items are discussed/clarified.
4:30	Respond to trainees' concerns and questions.

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Day Two

8:30 Review training manual on Sections 1 and 2 dealing with Classroom Specific Areas and Learning Centers.

Trainees view 12 slides and identify the area represented by each slide. Trainees then answer items of Sections 1 and 2.

Trainees record answers on chart.

Trainees check answers with partner.

Large group discussion to clarify items dealing with classroom specific areas and Learning Centers.

10:00 Break.

10:15 Review training manual on the section dealing with Classroom Management (Section 8).

Trainees answer items in Section 8 using written examples of teachers' management behavior in the classroom.

Trainees record their answers on chart.

Trainees check answers with partner.

Large group discussion to clarify items relating to Classroom Management.

12:00-1:30 Lunch.

1:30-3:15 Criterion Test. The format of the simulated situations used for testing is the same as that for training, but original sets of materials are used. The schedule of the test is indicated below:

1:30-2:00 Classroom Materials (Sections 3, 4, and 5).

2:00 Classroom Specific Areas and Learning Centers (Sections 1 and 2).

2:30 Learning Experience/Language and Overall Impressions.

3:00 Classroom Management.

3:15 Break.

3:30 Tally criterion test results. Discuss criterion results. Discuss the scoring method of the One-Day Classroom Observation Instrument.

Data Results. The criterion test level was arbitrarily set at five errors or less. That is, the person is considered to have acquired the competency of using the instrument reliably and may train others to use the instrument if he missed five or less of the 44 designated items on the criterion test. Of the 70 items on the original test, 26 were not included in the criterion test for various reasons: the 15 items in Section 7 had the same format as those in Section 6; 4 items in Section 9 require the observer to make a judgmental rating; and 7 items either were inadequately defined at the time or the examples provided in the test materials were not clear.

Of the 27 participating trainees, one did not complete the criterion test because of other commetments; 19 met the criterion level; 7 did not. The median number of errors (items answered incorrectly) was 4, the mean was 4.6. The item most frequently missed was item 6.15, which has to do with integrating what was learned for the learners -- "Was there any indication that the teacher plans to directly build upon or reinforce what was learned in this activity in a follow-up activity?"

Sections 1 and 2, which relate to presence of specific areas in the classroom and arrangements of learning centers, proved to be the most reliable.

During the training, trainees had at least two experiences of using each section of the instrument. After each experience, participants recorded their responses on work sheets so that a record of individual progress was maintained. Of the 27 trainees, 25 had records of their responses to every experience. The total number of errors was calculated for each experience. These data suggest that although trainees were able to use the instrument rather accurately at their initial experience when the manual was their only resource, subsequent discussions were helpful to the trainees and led to their improved performance. Trainees made

00025

significantly less errors at the criterion test than during the training: $z = 3.26$, $p < .01$.

At the end of the workshop, the trainees completed a questionnaire which asked them to assess whether they could use the instrument and train others to use it. On the same questionnaire, they indicated which parts of the workshop were meaningful to them and which parts they would change.

All 27 felt that they were either somewhat prepared or well prepared to use the instrument or to train others to use it in classrooms. The majority of the trainees were still unsure about some items in Sections 6 and 7, but felt comfortable using all other sections of the instrument. Twelve people indicated that they could definitely train others to use the instrument but the remaining fifteen stated that they felt they could train others provided they could first practice using the instrument in classrooms themselves.

Both the procedure used and the instrument itself were considered meaningful to the trainees. The trainees pointed to the following aspects of the workshop as most meaningful to them:

- Receiving instrument that serves multipurpose, training, measuring, self-assessment;
- The integration of sections and sharing of group;
- Using instrument step-by-step;
- Having definite questions in mind in observation instead of just relying on personal knowledge or experience;
- Sharing-using-evaluating the total instrument;
- The process of the workshop;
- The analysis-discussion on the analysis;
- The final criterion test;

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- Actually using the instrument/getting clarification on the items/ exchanging opinions and feelings.

The trainees also indicated some weaknesses in the training materials and procedures used:

- There should be smaller sections than the 15-minute videotape;
- The lack of math in Section 7;
- Marking areas on slides would help;
- Recording scores took too much time but can't offer any ideas on a better way.

Several findings confirmed the assumption that the training materials and procedures used were useful. All trainees reported that they felt prepared to conduct classroom observations with the instrument and able to train others to use it. Also, about 70 percent of the trainees successfully achieved the quite stringent criterion level and there was significant improvement in performance from training experience to criterion test. That trainees were able to use the instrument before the training began is partly due to trainees' knowledge of the Responsive Education Program; it also suggests that the instrument and the manual are easy to use and most of the items are clearly defined.

To date the training has been with personnel who work in the Responsive Education Program. Training effectiveness should be established with audiences not involved in the program.

Further, trainees showed overall improvement; some areas their improvement was less than in other areas, and there were some items trainees consistently found difficult to observe accurately. These items required trainees to "evaluate" if children's works show a variety of expressions and represent various media. While others ask if the teacher individualizes instructions, limits choices to a manageable number for the children, uses open-ended questions, and builds upon what was learned in a follow-up activity.

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Much effort was spent clarifying and revising these items during the workshop, however, more training is needed to accurately observe for these more difficult items.

This training confirmed that the One-Day Classroom Observation Schedule is relatively easy to use, and that it contains essential elements of the Responsive Education Program. Two people not directly involved in the Responsive Education Program were trained to criterion. This increased optimism of the possibility of non-Responsive Program school personnel being trained to use the instrument.

V. Field Testing

As a result of the February workshop, about a score of participants, most of them Program Advisors, achieved apparent competence in both using the instrument reliably, and in training others in their district to use it.

Subsequently, in April and May, extensive field testing was conducted in seven Follow Through districts. To accomodate Laboratory goals and specific district needs, testing designs varied from one district to another. The Laboratory's field testing objectives centered around the following research areas:

1. The reliability of the instrument.
2. The effectiveness of observation training conducted by district personnel who had been trained by the Laboratory.
3. The factor structure of the nine sections of the instrument.
4. The development of norms and procedures for diagnosing and evaluating classroom implementation.
5. The effects of amount of experience in the program on specific aspects of program implementation.
6. The concurrent reliability of the Responsive Classroom Observation Schedule with reference to the Stanford Research Institute (SRI) Classroom Observation Instrument.

At this juncture we are able to report data bearing on the first four areas of concern.

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Sample. There were 102 teachers from seven districts observed in this study. Of these, 79 were currently teaching in the Responsive Education Follow Through Program. The remainder were either in non-Follow Through classroom (13) or in Right Start (10). Table 1 shows how the 102 teachers were distributed in terms of years of Follow Through experience. Seven non-Follow Through and Right Start teachers actually had one or more years of previous Follow Through experience. The 102 classrooms observed reflected the following grade levels: K (36); 1st (14); 2nd (21); 3rd (27); and combination classrooms (4).

Table 1

Years of Follow Through Teaching Experience of Teachers in Classroom Observation Sample.

0 years	16
1 year	26
2 years	11
3 years	15
4 years	14
5 years	10
6 years	6
7 years	1
Data unavailable	3

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Inter-Observer Reliability. To determine observer reliability, 49 classrooms underwent paired observation. Tables 2 and 3 show the means and standard deviations for each section of the instrument, and the inter-observer correlations. As indicated in Table 2, Sections 1-7 are composed of dichotomous items, Section 8 contains tallies of behavior, and Section 9 consists of judgmental ratings.

Table 2

Responsive Observation Schedule Reliability Study: Paired Observers Means and SDs

Area	(n)	Observation 1 $\bar{X}$	Observation 1 SD	Observation 2 $\bar{X}$	Observation 2 SD
1	49	3.90	1.27	3.96	1.26
2	49	4.92	.91	4.82	1.01
3	49	5.16	1.87	5.31	1.85
4	49	5.29	1.40	5.24	1.30
5	48	2.22	1.50	2.38	1.39
6	48	7.81	2.28	7.27	2.16
7	38	6.68	2.35	6.65	2.14
8.1	49	.37	.70	.33	.63
8.2	49	2.10	2.73	1.55	2.17
8.3	49	.22	.80	.08	.34
9	48	15.20	2.94	14.71	2.84

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Table 3

Inter-Observer Reliabilities for Eleven Observation Schedule Areas

Area	Items Number	Items Nature	Number Observer Pairs	r
1. Presence of Specific Areas	6	dichotomous	49*	.84
2. Focus/Learning Center	6	dichotomous	49	.80
3. Materials/Language	8	dichotomous	49	.80
4. Materials/Children's Representation	7	dichotomous	49	.84
5. Materials/Family Home Culture	5	dichotomous	48	.77
6. Learning Exp./Lang. Pre-Reading	14	dichotomous	48	.67
7. Learning Exp./Math	14	dichotomous	38**	.82
8.1 Classroom Management/Demeaning	open	tally	49	.10
8.2 Classroom Management/Redirection	open	tally	49	.77
8.3 Classroom Management/Ignored Behavior	open	tally	49	.24
9 Judgmental Ratings	4	5-point rating continuum	48	.78

* Originally 69 classrooms were observed for the reliability study. When reliability coefficients were calculated on the 69 cases, all were higher than those reported in this paper. Most notably, reliabilities for Sections 8.1 and 8.3 were .86 and .72, as compared with the reported .10 and .24. Fortunately for science, an examination of the data aroused the suspicion that observer pairs in one district had conferred with one another. A telephone call confirmed this suspicion. The data were subsequently reanalyzed without the 20 cases in question, and this analysis reported. The reason that reliabilities for Sections 8.1 and 8.3 dropped so drastically was that observers in the problem district were also scoring five times as many tallies in this category, while still agreeing perfectly with one another. Thus two conditions for a high correlation were established: variability among scores and agreement at the extremes. In any event, these difficulties further underscore the necessity to revise Section 8.

** Observers in one district did not observe for this section.

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The inter-observer correlations for Sections 1-7 ranged from .77 to .84. Section 9, containing judgmental ratings, had a reliability of .78. Section 8, where observers tallied specific behaviors, yielded the lowest reliabilities: .10, .77, and .24.

The inter-observer reliabilities for all sections except Section 8 are quite respectable for an observation instrument. They reflect generally high agreement among observers and are encouraging, given the nature of the instrument and the content being observed. Section 8 however, will need to be revised before it can be used on a widespread basis.

In a small reliability substudy, separate correlations were computed for three types of observer pairs: 1) both observers had received the Laboratory training detailed in this paper; 2) one observer had received Laboratory training and the other had been trained by local district staff who had received Laboratory training; 3) both observers had been trained by local district staff who had received Laboratory training.

Table 4 shows the reliability coefficients of the three groups for the nine sections of the instrument. There is no apparent drop in reliability for groups 2 and 3, except for the items in Section 8. If anything, reliabilities for group 3 are somewhat higher than the other groups. This unexpected result might be explained by the fact that unlike the first two groups which were comprised of staff members from different districts, all of the observer pairs in group 3 were from the same district and were trained together. They are more likely to have similar points of view concerning the Responsive Education Program as a result of their working together to implement the program in the district.

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Table 4

Inter-Observer Reliabilities for Three Groups of Observers: Laboratory Trained; Laboratory Trained and District Trained; District Trained.

Section	Group 1 Lab Trained/ Lab Trained (n = 18)	Group 2 Lab Trained/ District Trained (n = 18)	Group 3 District Trained/ District Trained (n = 13)
1	.88	.67	.94
2	.78	.65	.94
3	.64	.88	.96
4	.64	.86	.91
5	.73	.77	.77
6	.54	.70	.95
7	.83	.78	.92
8.1	.50	-.13	.19
8.2	.87	.60	.66
8.3	1.00	.12	*
9	.83	.75	.72

* Unable to compute.

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The reliability breakdowns in Table 4 indicate that someone familiar with the instrument can train others to observe reliably. However, one caveat of our work which should be stressed is that all observers in the study were Program Advisors or other district personnel who had been working with the program for the last several years. Thus while we are confident that persons involved in the program can be trained to use the instrument reliably, we have not yet answered the question of how effective observation training would be with persons not already familiar with Responsive Education Program philosophy and teaching methods.

Factor Analysis. Observations of 102 classrooms were analyzed to identify the factor structure of the Responsive Classroom Observation Schedule. Individual section totals for Sections 1-7 and 9, plus individual tallies for Sections 8.1, 8.2, and 8.3 were entered into the factor analysis.

The factor analysis yielded three factors with eigen values greater than one, accounting for 100% of the variance. Table 5 shows the three factors and the factor loadings for each. Factor 1, which accounts for 60% of the variance is labeled structure. The principal loadings on this factor are the classroom arrangement and materials sections. Factor 2, which accounts for 25% of the variance, is a result of the language lesson, math lesson, and subjective rating, and is labeled process. The nature of factor 3 may be left in abeyance at this point as it is influenced by the items in Section 8, which are being revised due to inadequate reliability.

Based on this initial factor analysis, it appears that structure and process are distinct variables of classroom implementation as measured by the Responsive Classroom Observation Schedule.

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Table 5

Varimax Rotated Factor Matrix of Responsive Observation Instrument.

Section	Factor 1 Arrangement and Materials	Factor 2 Process
1	.548*	.196
2	.495*	.041
3	.681*	.217
4	.625*	-.008
5	.689*	-.013
6	.206	.571*
7	.214	.638*
8.1	.140	-.588*
8.2	.199	.113
8.3	-.106	-.139
9	.370	.762*

* Denotes salient loading.

00035

Norms. One objective of the field testing was to establish norms for the instrument. A sample of 75 teachers with one or more years of teaching experience in the Responsive Education Follow Through Program was selected from the 102 classrooms observed for the study. As a number of these teachers had been observed as part of the reliability study, it was necessary to select one of the two reliability observations to place into the norming sample. This was done through random selection, except that in cases where one of the two observers had been trained by the Laboratory and one had not, the Laboratory-trained observers were selected.

Table 6 shows the means and standard deviations for the group of 75 experienced Responsive Education Follow Through teachers. Table 7 shows the scoring format which is included in the instrument. The line running down the profile chart indicates the average score made by the 75 teachers in the norm group. The shaded area shows the scores made by approximately 50 of those 75 teachers. It begins at a point one standard deviation below the mean and extends to a point one standard deviation above the mean. Scores more than one standard deviation below the mean are considered indicative of "low implementation."

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Table 6

Section Means and Standard Deviations for Norm Group of 75 Experienced Follow Through Teachers.

Section	Mean	S.D.
1	4.49	.96
2	5.20	1.05
3	5.84	1.74
4	5.73	1.19
5	3.00	1.59
6	8.83	2.79
7	7.85	3.00
8.1	.67	1.57
8.2	3.40	3.47
8.3	.15	.46
9	15.75	3.23

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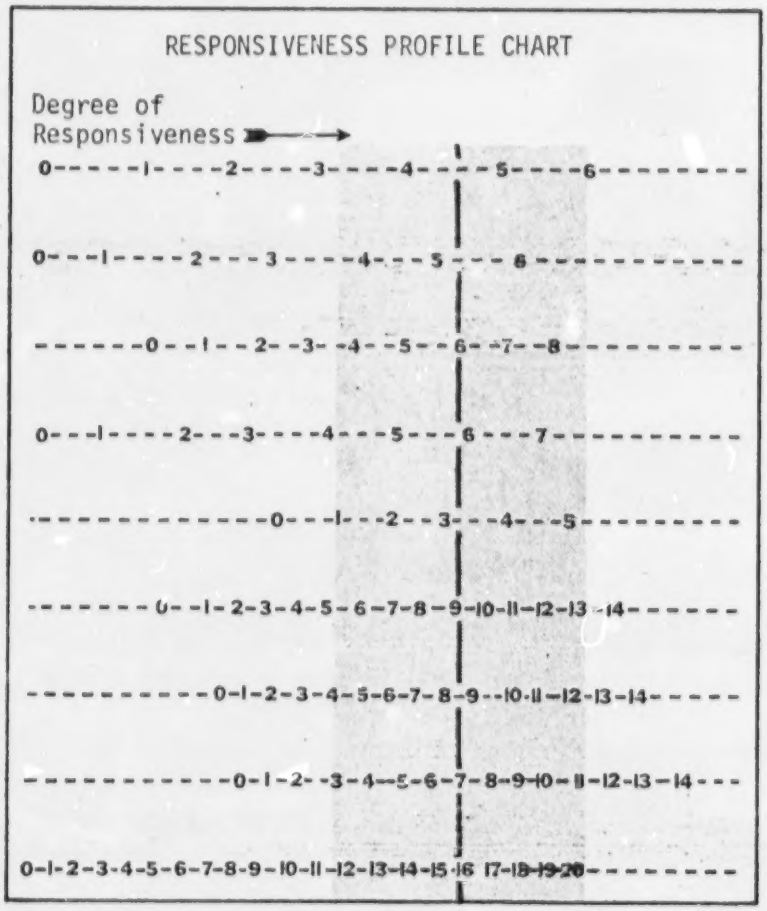
Table 7

Individual Profile Sheet Based on Norms of 75 Experienced Follow Through Teachers

Section	Total Score
1. Presence of Specific Areas	
2. Learning Center	
3. Materials: Language	
4. Materials: Personal Representation	
5. Materials: Family, Home, Culture	
6. Learning Experience: Language/Pre-Reading	
7. Learning Experience: Math/Pre-Math	
8. Classroom Management	
9. Overall Impressions	



Note: Section 8, Classroom Management, is revised after field test. Its scoring format in the profile chart was arbitrarily determined, by the developers and implementers of the Responsive Education Program.

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VI. Continuing Efforts

Work to date on the Responsive Classroom Observation Schedule has been encouraging. A refined instrument that can be completed in a day has been developed. Training materials and procedures have been organized and tested. And a field test has been conducted. The instrument has been improved by revisiors and providing a Score Profile Worksheet. Continuing activities related to classroom observation are being directed in the following areas:

- examining the reliability of observation data;
- examining the effects of amount of experience in the program on specific aspects of program implementation;
- examining the concurrent reliability of the observation instrument with the one developed by SRI;
- examining the relationship of observation data to child outcomes;
- focusing on specific areas of classroom process such as adult/child interaction.

These ongoing efforts will result in the production of a precise, tested tool to assess "responsiveness" in the classroom. Classroom observation data can then be used to provide better feedback to teachers and to clarify important program implementation effects.

Revised
3/24/75
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